

Appl. No. 10/709,890
Amdt. dated December 27, 2005
Reply to Office action of September 27, 2005

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

- 5 Claim 1 (currently amended) A display panel comprising:
- a silicon substrate with a pixel area located in a surface of the silicon substrate;
- a micro color filter disposed on the pixel area on the silicon substrate,
10 the micro color filter being composed of a plurality of stacked optical thin films, and comprising a low index optical thin film stack or a high index optical thin film stack;
- a liquid crystal layer disposed on the micro color filter;
- a top alignment layer positioned on the liquid crystal layer; and
- a transparent conductive layer disposed on the top alignment layer;
- 15 wherein when light enters into the display panel, only a specific spectrum of light is permitted to transmit through the micro color filter and is then reflected upward by the silicon substrate to form images.
- 20 Claim 2 (original) The display panel of claim 1 wherein the display panel further comprises a bottom alignment layer disposed between the liquid crystal layer and the micro color filter.
- Claim 3 (original) The display panel of claim 1 wherein the display panel
25 further comprises a bottom alignment layer disposed between the silicon substrate and the micro color filter.
- Claim 4 (original) The display panel of claim 1 wherein the display panel

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further comprises a driving circuit disposed on the surface of the silicon substrate, the driving circuit comprising a plurality of metal electrodes to reflect incident light through the micro color filter upward to form images.

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Claim 5 (cancelled)

Claim 6 (currently amended) The display panel of claim [[5]] 1 wherein the low index optical thin film stack comprises a silicon oxide (SiO_2) layer.

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Claim 7 (currently amended) The display panel of claim [[5]] 1 wherein the high index optical thin film comprises a titanium oxide (TiO_2) layer or a tantalum oxide (Ta_2O_5) layer.

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Claim 8 (original) The display panel of claim 1 wherein the liquid crystal layer comprises liquid molecules aligned in a homeotropic type or a twist nematic type.

20 Claim 9 (original) The display panel of claim 1 wherein a thickness of the liquid crystal layer is about 0.5 to 10 microns.

Claim 10 (currently amended) A display panel comprising:
a silicon substrate with a first pixel area, a second pixel area, and a
25 third pixel area defined in a surface of the silicon substrate;
a first micro color filter, a second micro color filter, and a third micro color filter respectively disposed in the first pixel area, the second pixel area, and the third pixel area on the surface of the

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5 silicon substrate, each of the first micro color filter, the second
 micro color filter, and the third micro color filter being
 composed of a plurality of stacked optical thin films, and
 comprising a low index optical thin film stack or a high index
 optical thin film stack;

 a bottom alignment layer disposed on the first micro color filter, the
 second micro color filter, and the third micro color filter;
 a liquid crystal layer disposed on the bottom alignment layer;
 a top alignment layer disposed on the liquid crystal layer; and
10 a transparent conductive layer disposed on the top alignment layer;
 wherein when light enters the display panel, lights of a first specific
 spectrum, a second specific spectrum, and a third specific spectrum are
 reflected from the first pixel area, the second pixel area, and the third pixel
 area respectively.

15 Claim 11 (original) The display panel of claim 10 wherein the display panel
 further comprises a driving circuit disposed on a surface of the silicon
 substrate to drive the substrate and reflect light transmitting through
 the first micro color filter, the second micro color filter, and the third
20 micro color filter upward to form images.

 Claim 12 (original) The display panel of claim 10 wherein light of the
 first specific spectrum, the second specific spectrum, and the third
 specific spectrum are red, blue, and green light respectively.

25 Claim 13 (cancelled)

 Claim 14 (currently amended) The display panel of claim [[13]] 10

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wherein the low index optical thin film stack comprises a silicon oxide (SiO₂) layer.

5 Claim 15 (currently amended) The display panel of claim [[13]] 10
 wherein the high index optical thin film comprises a titanium oxide (TiO₂) layer or a tantalum oxide (Ta₂O₅) layer.

10 Claim 16 (original) The display panel of claim 10 wherein the liquid crystal layer comprises liquid molecules aligned in a homeotropic type or a twist nematic type.

 Claim 17 (original) The display panel of claim 10 wherein a thickness of the liquid crystal layer is about 0.5 to 10 microns.

15 Claim 18 (original) The display panel of claim 10 wherein the display panel further comprises a cooling system on the silicon substrate.

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